# COMP 7016 VISUALISATION

**Credit Points** 10

**Legacy Code** 301112

**Coordinator** Zhonglin Qu (https://directory.westernsydney.edu.au/search/name/Zhonglin Qu/)

**Description** This subject introduces the fundamentals and technologies of information visualisation. It covers the major concepts of information visualisation, human-computer perception and methods for visual data analysis. Students will learn the knowledge and skills required for identifying suitable visualisation techniques and tools appropriate for various data types and applications. The subject provides students with opportunities to explore recent research in the visualisation field. Please note any offerings at Melbourne campus are only applicable for Australian Technical and Management College (ATMC) students.

**School** Computer, Data & Math Sciences

**Discipline** Computer Science

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

**Level** Postgraduate Coursework Level 7 subject

**Pre-requisite(s)** MATH 7016 ( for students in 3779)

**Incompatible Subjects** MATH 2014 Visual Analytics

**Restrictions**

Students must be enrolled in a postgraduate program.

**Assumed Knowledge**

Familiarity with computer software programs, such as Microsoft Office.

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain the purpose of information visualisation
2. Identify strengths, limitations and opportunity of visualisation techniques
3. Evaluate common visualisation techniques for relational data, multi-dimensional data and spatio-temporal data
4. Analyse interaction methods in visualisation
5. Apply common visualisation tools for data analysis
6. Evaluate visual analytics technologies and tools for data analysis

## Subject Content

Information visualisation including main concepts and overview
Visual mappings and visual perception
Trees and graphs visualisation
Multi-dimensional data visualisation
Spatio-temporal data visualisation
Interaction
Using visualisation and tools to understand data
Visual Analytics

## Attendance

Attendance at tutorial / practical classes is considered compulsory and students are expected to attend all tutorial classes. Students should attend the tutorial that they registered in and continue to attend this tutorial throughout the semester. This practice enables students to maintain adequate performance and continuity in their program and tutors to maintain contact and monitor students' progress.

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

| Type | Length | Percent | Threshold | Individual/ Group Task | Mandatory |
|---|---|---|---|---|---|
| Practical | 2 hours each | 20 | N | Individual | Y |
| Report | 1,500 to 2,000 words report | 30 | N | Individual | Y |
| Report | 1,500 to 2,000 words report | 30 | N | Individual | Y |
| Quiz | 60 minutes | 20 | N | Individual | Y |

Teaching Periods

## Autumn (2025)

### Parramatta - Victoria Rd

#### On-site

**Subject Contact** Quang Vinh Nguyen (https://directory.westernsydney.edu.au/search/name/Quang Vinh Nguyen/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP7016_25-AUT_PS_1#subjects)

## Quarter 3 (2025)

### Parramatta City - Macquarie St

#### On-site

**Subject Contact** Zhonglin Qu (https://directory.westernsydney.edu.au/search/name/Zhonglin Qu/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP7016_25-Q3_PC_1#subjects)